WHAT IS CLAIMED IS:

1. A method of modulating the trafficking or activation of a leukocyte in an animal, said method comprising contacting myeloid lineage cells in said animal with a therapeutic amount of:

a) an agonist of a mammalian OX2 protein; or

b) an antagonist of a mammalian OX2 protein.

2. The method of Claim 1, wherein said:

a) mammalian OX2 protein is a primate protein;

b) antagonist is an antibody which binds to said mammalian OX2; or

c) said cells are monocyte/macrophage lineage cells.

3. The method of Claim 2, wherein said myeloid lineage cells include a monocyte, macrophage, microglial, or dendritic cell.

4. The method of Claim 1, wherein said animal exhibits signs or symptoms of an inflammatory, infective, leukoproliferative, neurodegenerative, or post-traumatic condition.

5. The method of Claim 4, wherein said sign or symptom is in neural tissue; lymphoid tissue; myeloid tissue; pancreas; gastrointestinal tissue; thyroid tissue; muscle tissue; or skin or collagenous tissue.

6. The method of Claim 1, wherein said modulating is inhibiting function of said leukocyte cell.

7. The method of Claim 6, wherein said administering is said agonist.

8. The method of Claim 7, wherein said agonist is said mammalian OX2.

9. The method of Claim 7, wherein said animal is experiencing signs or symptoms of autoimmunity; an inflammatory condition; an infection; tissue specific autoimmunity; degenerative autoimmunity; rheumatoid arthritis; atherosclerosis; multiple sclerosis; vasculitides; delayed hypersensitivities; skin grafting; a transplant; spinal injury; stroke; neurodegeneration; or ischemia.

10. The method of Claim 7, wherein said administering is in combination with:

a) an anti-inflammatory cytokine agonist or antagonist;
b) an analgesic;
c) an anti-inflammatory agent; or
d) a steroid.

11. The method of Claim 1, wherein said modulating is enhancing function of said leukocyte cell.

12. The method of Claim 11, wherein said administering is said antagonist.

13. The method of Claim 12, wherein said antagonist is:

a) an antibody which binds to said mammalian OX2; or
b) a mutein of said mammalian OX2 which competes with said mammalian OX2 in binding to an OX2 receptor, but does not substantially signal.

14. The method of Claim 12, wherein said animal experiences signs or symptoms of wound healing or clot formation.

15. The method of Claim 12, wherein said administering is in combination with:

a) an angiogenic factor;

b) a growth factor, including FGF or PDGF;

c) an antibiotic; or

d) a clotting factor.

16. A method of modulating the activation of a leukocyte in a tissue, said method comprising contacting myeloid lineage cells in said tissue with:

a) an agonist of a mammalian OX2 protein; or

b) an antagonist of a mammalian OX2 protein.

17. The method of Claim 16, wherein said modulating is inhibiting said leukocyte cell, and said contacting is with said agonist.

18. The method of Claim 17, wherein said administering is in combination with:

a) an anti-inflammatory cytokine agonist or antagonist;

b) an analgesic;

c) an anti-inflammatory agent; or

d) a steroid.

19. The method of Claim 16, wherein said modulating is enhancing, and said contacting is with said antagonist.

20. The method of Claim 19, wherein said administering is in combination with:

a) an angiogenic factor;

b) a growth factor, including FGF or PDGF;

c) an antibiotic; or

d) a clotting factor.